AMENDMENTS TO THE CLAIMS

Please cancel claims 1 and 8 without prejudice or disclaimer.

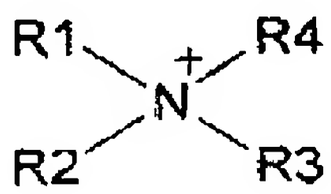
1. (Canceled)

2. (Currently amended) A ~~The~~ nonaqueous electrolyte ~~of claim 1~~, comprising:

an organic solvent and a lithium salt dissolved in the organic solvent; and

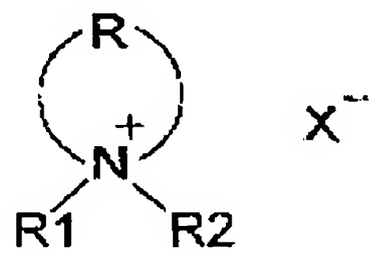
a quaternary ammonium salt in an amount of 0.06 mol/L or greater and 0.5 mol/L or less,

~~characterized in that~~ the quaternary ammonium salt having ~~has~~ a structure represented by any of (chemical formula 1), (chemical formula 2), and (chemical formula 3):



(chemical formula 1)

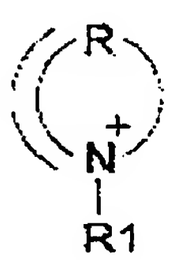
(wherein R1, R2, R3, and R4 each are either an alkyl group having 1-6 carbon atoms or an alkyl group in which at least part of the hydrogen atoms each has been replaced by a fluorine atom; and X^- is a fluorine-containing anion, and wherein R1=R2=R3=R4 is excluded).



(chemical formula 2)

(wherein R is a divalent organic linking group having a main chain which has 4-5 atoms and is constituted of at least one member selected from carbon, oxygen, nitrogen, sulfur, and phosphorus; R1 and R2 each are either an alkyl group having 1-6 carbon atoms or an alkyl group in which at least part of the hydrogen atoms each has been replaced by a fluorine atom; and X^- is a

fluorine-containing anion),



(chemical formula 3)

(wherein R is an organic linking group or an organic linking group forming an aromatic ring, the organic linking groups each having a main chain which has 4-5 atoms and is constituted of at least one member selected from carbon, oxygen, nitrogen, sulfur, and phosphorus and having one single-bond end and one double-bond end; R1 is an alkyl group having 1-6 carbon atoms or an alkyl group in which at least part of the hydrogen atoms each has been replaced by a fluorine atom; and X^- is a fluorine-containing anion).

3. (Currently amended) The nonaqueous electrolyte of claim 2 ~~1~~, wherein said organic solvent comprises ~~characterized by containing~~ one or more organic solvents selected from the group consisting of ethylene carbonate, propylene carbonate, butylene carbonate, γ-butyrolactone, and γ-valerolactone.

4. (Currently amended) The nonaqueous electrolyte of claim 2 ~~1~~, wherein ~~characterized in that the anion species contained in~~ the nonaqueous electrolyte comprises ~~is~~ one or more members selected from the group consisting of BF_4^-, PF_6^-, $CF_3SO_3^-$, $N(CF_3SO_2)_2^-$, $N(C_2F_5SO_2)_2^-$, $N(CF_3SO_2)(C_4F_9SO_2)^-$, $C(CF_3SO_2)_3^-$, and $C(C_2F_5SO_2)_3^-$.

5. (Currently amended) A nonaqueous-electrolyte battery, comprising: ~~which comprises~~

a positive electrode, a negative electrode, and a nonaqueous electrolyte according to ~~, the battery having been fabricated using the nonaqueous electrolyte of~~ claim 2 ~~1~~.

6. (Currently amended)The nonaqueous-electrolyte battery of claim 5, wherein ~~characterized in that~~ the negative electrode comprises ~~employs~~ a graphite.

7. (Currently amended) The nonaqueous-electrolyte battery of claim 5, further comprising: ~~characterized by having~~

a sheath formed over said positive and negative electrodes and said electrolyte, said sheath comprising a metal/resin composite material.

8. (Canceled)

9. (Currently amended) A nonaqueous-electrolyte battery which comprises a positive electrode, a negative electrode, and a nonaqueous electrolyte according to ~~, the battery having been fabricated using the nonaqueous electrolyte of~~ claim 3.

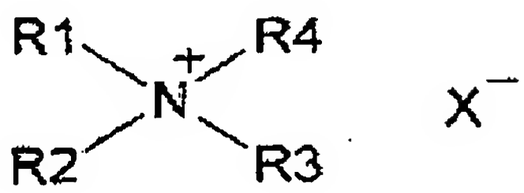
10. (Currently amended) A nonaqueous-electrolyte battery which comprises a positive electrode, a negative electrode, and a nonaqueous electrolyte according to ~~, the battery having been fabricated using the nonaqueous electrolyte of~~ claim 4.

11. (New) The nonaqueous electrolyte of claim 2, wherein said organic solvent comprises a member selected from the group consisting of propylene carbonate and butylene carbonate.

12. (New) A nonaqueous electrolyte, comprising:

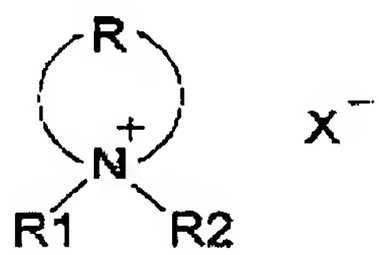
an organic solvent and a lithium salt dissolved in the organic solvent; and

a quaternary ammonium salt in an amount of 0.06 mol/L or greater and 0.5 mol/L or less, the quaternary ammonium salt having a structure represented by any of (chemical formula 1), (chemical formula 2), and (chemical formula 3):



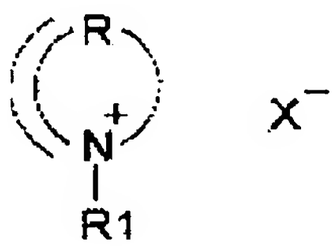
(chemical formula 1)

(wherein the quaternary ammonium salt having a structure represented by chemical formula 1 comprises a member selected from the group consisting of $(CH_3)_4NBF_4$, $(CH_3)_4NBr$, $(CH_3)_4N(CF_3SO_2)_2N$, $(CH_3)_4N(C_2F_5SO_2)_2N$, $(C_2H_5)_4NBF_4$, $(C_2H_5)_4NClO_4$, $(C_2H_5)_4NI$, $(C_2H_5)_4N(CF_3SO_2)_2N$, $(C_2H_5)_4N(C_2F_5SO_2)_2N$, $(C_3H_7)_4NBr$, $(n\text{-}C_4H_9)_4NBF_4$, $(n\text{-}C_4H_9)_4N(CF_3SO_2)_2N$, $(n\text{-}C_4H_9)_4N(C_2F_5SO_2)_2N$, $(n\text{-}C_4H_9)_4NClO_4$, $(n\text{-}C_4H_9)_4NI$, $(C_2H_5)_4N$-maleate, $(C_2H_5)_4N$-benzoate, and $(C_2H_5)_4N$-phtalate),



(chemical formula 2)

(wherein R is a divalent organic linking group having a main chain which has 4-5 atoms and is constituted of at least one member selected from carbon, oxygen, nitrogen, sulfur, and phosphorus; R1 and R2 each are either an alkyl group having 1-6 carbon atoms or an alkyl group in which at least part of the hydrogen atoms each has been replaced by a fluorine atom; and X^- is a fluorine-containing anion),



(chemical formula 3)

(wherein R is an organic linking group or an organic linking group forming an aromatic ring, the organic linking groups each having a main chain which has 4-5 atoms and is constituted of at least

one member selected from carbon, oxygen, nitrogen, sulfur, and phosphorus and having one single-bond end and one double-bond end; R1 is an alkyl group having 1-6 carbon atoms or an alkyl group in which at least part of the hydrogen atoms each has been replaced by a fluorine atom; and X^- is a fluorine-containing anion).

13. (New) The nonaqueous electrolyte of claim 2, wherein the quaternary ammonium salt having a structure represented by chemical formula 2 comprises a combination of an anion and a member selected from the group consisting of a pyrrolidinium cation, piperidinium cation, and pyrrolium cation.

14. (New) The nonaqueous electrolyte of claim 13, wherein the pyrrolidinium cation comprises a member selected from the group consisting of a 1,1-dimethylpyrrolidinium ion, 1-ethyl-1- methyl-pyrrolidinium ion, 1-methyl-1-propylpyrrolidinium ion, and 1-butyl-1-methylpyrrolidinium ion,

wherein the piperidinium cation comprises a member selected from the group consisting of a 1,1-dimethylpiperidinium ion, 1-ethyl-1-methylpiperidinium ion, 1-methyl-1-propylpiperidinium ion, and 1-butyl-1-methylpiperidinium ion, and

wherein the pyrrolium cation comprises a member selected from the group consisting of a 1,1-dimethylpyrrolium ion, 1-ethyl-1-methylpyrrolium ion, 1-methyl-1-propylpyrrolium ion, and 1-butyl-1-methylpyrrolium ion.

15. (New) The nonaqueous electrolyte of claim 2, wherein the quaternary ammonium salt represented by chemical formula 3 comprises a combination of an anion and a member selected from the group consisting of an imidazolium cation, pyrazolium cation, pyrrolinium cation, and pyridinium cation.

16. (New) The nonaqueous electrolyte of claim 15, wherein the imidazolium cation comprises a member selected from the group consisting of a 1,3-dimethylimidazolium ion,

1-ethyl-3-methylimidazolium ion, 1-butyl-3-methylimidazolium ion, 1,2,3-trimethylimidazolium ion, 1,2-dimethyl-3-ethylimidazolium ion, 1,2-dimethyl-3-propylimidazolium ion, and 1-butyl-2,3-dimethylimidazolium ion,

wherein the pyrazolium cation comprises a member selected from the group consisting of a 1,2-dimethylpyrazolium ion, 1-ethyl-2-methylpyrazolium ion, 1-propyl-2-methylpyrazolium ion, and 1-butyl-2-methylpyrazolium ion,

wherein the pyrrolinium cation comprises a member selected from the group consisting of a 1,2-dimethylpyrrolinium ion, 1-ethyl-2-methylpyrrolinium ion, 1-propyl-2-methylpyrrolinium ion, and 1-butyl-2-methylpyrrolinium ion, and

wherein the pyridinium cation comprises a member selected from the group consisting of an N-methylpyridinium ion, N-ethylpyridinium ion, N-propylpyridinium ion, N-butylpyridinium ion, 1-ethyl-2-methylpyridinium, 1-butyl-4-methylpyridinium, and 1-butyl-2,4-dimethyl-pyridinium.

17. (New) The nonaqueous electrolyte of claim 15, wherein the anion comprises a member selected from the group consisting of a chlorine anion, bromine anion, ClO_4 anion, BF_4 anion, PF_6 anion, CF_3SO_3 anion, $N(CF_3SO_2)_2$ anion, $N(C_2F_5SO_2)_2$ anion, $N(CF_3SO_2)(C_4F_9SO_2)$ anion, $C(CF_3SO_2)_3$ anion, and $C(C_2F_5SO_2)_3$ anion.

18. (New) The nonaqueous electrolyte of claim 2, wherein said amount of said quaternary ammonium salt is 0.1 mol/L or greater and 0.35 mol/L or less.

19. (New) The nonaqueous electrolyte of claim 2, wherein said lithium salt comprises a member selected from the group consisting of $LiBF_4$, $LiPF_6$, $LiCF_3SO_3$, $LiN(CF_3SO_2)_2$, $LiN(C_2F_5SO_2)_2$, $LiN(CF_3SO_2)(C_4F_9SO_2)$, $LiC(CF_3SO_2)_3$, and $LiC(C_2F_5SO_2)_3$.

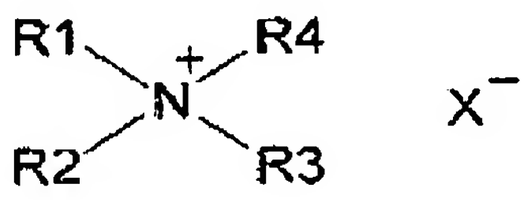
20. (New) A nonaqueous-electrolyte battery, comprising:

a power generating unit comprising a positive electrode, a negative electrode, and a separator interposed between said positive and negative electrodes; and

a nonaqueous electrolyte impregnated into said power generating unit, said nonaqueous electrolyte comprising:

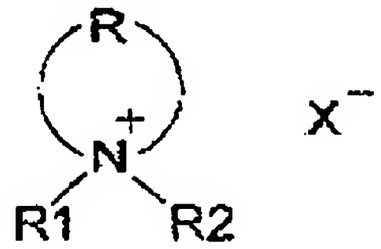
an organic solvent and a lithium salt dissolved in the organic solvent; and

a quaternary ammonium salt in an amount of 0.06 mol/L or greater and 0.5 mol/L or less, the quaternary ammonium salt having a structure represented by any of (chemical formula 1), (chemical formula 2), and (chemical formula 3):



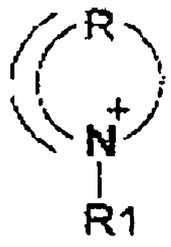
(chemical formula 1)

(wherein R1, R2, R3, and R4 each are either an alkyl group having 1-6 carbon atoms or an alkyl group in which at least part of the hydrogen atoms each has been replaced by a fluorine atom; and X^- is a fluorine-containing anion, and wherein R1=R2=R3=R4 is excluded),



(chemical formula 2)

(wherein R is a divalent organic linking group having a main chain which has 4-5 atoms and is constituted of at least one member selected from carbon, oxygen, nitrogen, sulfur, and phosphorus; R1 and R2 each are either an alkyl group having 1-6 carbon atoms or an alkyl group in which at least part of the hydrogen atoms each has been replaced by a fluorine atom; and X^- is a fluorine-containing anion),



(chemical formula 3)

(wherein R is an organic linking group or an organic linking group forming an aromatic ring, the organic linking groups each having a main chain which has 4-5 atoms and is constituted of at least one member selected from carbon, oxygen, nitrogen, sulfur, and phosphorus and having one single-bond end and one double-bond end; R1 is an alkyl group having 1-6 carbon atoms or an alkyl group in which at least part of the hydrogen atoms each has been replaced by a fluorine atom; and X^- is a fluorine-containing anion).